

the claims with all the changes shown is attached also.

REMARKS

Claims 1-5 are in the application.

The drawings are objected to under 37 CFR 1.83 (a) for not showing at least one bubble level or bubble level as specified in the claims. Drawing proposal Fig. 3 is submitted herewith showing a conventional bubble level 7 in a recess of the level body. A proper letter to the draftsman accompanies this drawing proposal.

Claims 2-3 are objected to because of informalities. Apparently, the examiner meant to indicate claims 3 and 4 since claim 3 refers to synthetic material and claim 4 to bubble levels. These claims have been corrected accordingly.

Reconsideration and withdrawal of the rejection of claims 1-2 under 35 U.S.C. 103(a) as being unpatentable over Goss et al. in view of Smith et al. is respectfully requested.

The examiner states that the reference to Goss et al. shows a spirit level comprising a bubble level 10, a bubble 46, a

recess and a housing. The examiner relies on Smith et al. for teaching that a float (level) can be made of foamed aluminum. The examiner argues that it would have been obvious to make the level disclosed by Goss et al. of foamed aluminum material as taught by the Smith reference so as to be a lightweight and corrosion-free device.

The cited prior art reference Smith et al. shows a floating boom for retaining oil contamination on bodies of water during weather conditions with strong winds that produce relatively short choppy waves. In col. 8, lines 30 to 35, it is described that the float 21 may be produced of foamed aluminum blocks.

Self-righting floats as those described in the Smith patent are faced with entirely different problems than a level for determining horizontal or vertical alignment. Requirements that must be fulfilled by a float for containing oil contamination on bodies of water are buoyance, resistance to oil as well as high temperature resistance in the case of a fire.

Applicant respectfully submits that floats for floating booms relate to an entirely different technical field than levels which are placed on solid surfaces in order to determine whether the surfaces are in proper horizontal or vertical alignment.

A level, on the other hand, is a measuring device which must provide great accuracy and must be manipulated by hand for measuring surfaces. The workman must be able to carry the level, move it, position it against a surface, vertically or horizontally, and the self-righting and buoyant properties of a floating body have nothing to contribute to these requirements. A level is not designed to right itself - it is designed to indicate deviations from a horizontal or vertical line. Also, it is of no consequence for a level whether it can float or not.

The particular property required of a level as discussed in the present application is high accuracy - which, as explained in the specification, is hard to achieve with synthetic materials while aluminum level bodies of a hollow configuration make it difficult to attach the bubble level. These are disadvantages for mass-producing level bodies inexpensively.

Surprisingly, great level accuracy can be achieved by producing the level body of a foamed metal, for example, foamed aluminum. The floats described in the Smith patent do not require a particular accuracy with regard to shape and the reference to Smith also does not provide any suggestion that the use of foamed aluminum could produce a body with particularly high shape precision.

The float described in Smith et al. conveys to a person skilled in the art useful properties in connection with a floating containment, such as buoyance, resistance to oil etc. But a person skilled in the art would not look to a float to find a solution to the problem of producing a level body having great accuracy and planarity.

Claims 1 and 2 are therefore not obvious in view of the cited prior art references.

Reconsideration and withdrawal of the rejection of claims 3 and 5 under 35 U.S.C. 103(a) as being unpatentable over Goss et al. and Smith et al. and further in view of Hettinga is respectfully requested.

The reference to Hettinga is relied upon to show a level frame made of a smooth non-porous skin or coating while the inside is made of foamed material. In examiners view it would therefore have been obvious to provide the device resulting from a combination of Goss and Smith with a non-porous coating as taught by Hettinga.

The reference to Hettinga describes molding of a foamable plastic material in a mold, wherein the amount of plastic

introduced into the mold is less than the amount required to fill the mold completely so as to allow foaming. The mold walls are cooled and the material introduced into the mold upon expansion will cool and solidify immediately on the mold wall while the interior of the mold at a higher temperature allows the plastic to expand and form a foamed interior. This is described in col. 4, lines 5-21. Accordingly, the reference teaches a method of producing of the same material in a single molding step a solid shell on a foamed core. This is impossible to carry out with a metal foam and a coating of synthetic material as claimed in claim 3. Moreover, this method cannot be employed for foaming metal.

Claims 3 and 5 are not obvious in view of this prior art reference.

Reconsideration and withdrawal of the rejection of claim 4 under 35 U.S.C. 103 (a) as being unpatentable over Goss et al. and Smith et al. and further in view of Provi is respectfully requested. The reference to Provi is relied upon to show recesses for the vials or bubbles.

Claim 4 is believed to be allowable as a dependent claim of claim 1.

The examiner states that the information disclosure statement filed on Jan. 12, 2001, fails to comply with 37 CFR 1.98(a)(3) because it does not included concise explanation of the relevance of the German documents DE 4101630 and DE 4018360.

It is respectfully submitted that the relevance of these two German documents has been explained in the specification on page 4, third paragraph, and page 7, second paragraph. It is clearly stated therein that the references teach how to manufacture bodies of foamed metal. This is the relevance in regard to the application. It is furthermore respectfully submitted that the concise explanation of the relevance of references submitted in the form of an information disclosure statement must not be in the body of the information disclosure statement but may be provided in the text of the application. See MPEP 609 III MINIMUM REQUIREMENTS FOR AN INFORMATION DISCLOSURE STATEMENT - Content A(3). The information disclosure statement pointed out that the two references are discussed in the specification.

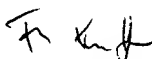
It is therefore respectfully submitted that the Examiner consider the properly submitted references.

Therefore, in view of the foregoing, it is submitted that this application is now in condition for allowance and such

allowance is respectfully solicited.

Any additional fees or charges required at this time in connection with the application may be charged to Patent and Trademark Office Deposit Account No. 11-1835.

Respectfully submitted,



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Encl.: amended claims 3, 4 (clean copy and marked-up version);
letter to draftsperson with drawing proposal Fig. 3; information
disclosure statement

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on May 1, 2002

By: 

Friedrich Kueffner

Date: May 1, 2002

Marked-up Version of Claims 3 and 4 to Show Changes Made

3. (Amended) The level according to claim 1, wherein the level body has a coating of a synthetic material.

4. (Amended) The level according to claim 1, wherein the level body has at least one recess ~~recesses~~ for the at least one bubble level ~~levels~~.

Marked-up Version of "Brief Description of the Drawing"

BRIEF DESCRIPTION OF THE DRAWING

In the drawing:

Fig. 1 is a perspective view of a level body of a foamed metal; ~~and~~

Fig. 2 is a schematic partial cross-sectional view of the level body of Fig. 1 taken along sectional line A-A; and

Fig. 3 is a detail view of a bubble level within the recess of the level body.

Marked-up Version of First Paragraph of Page 7

Fig. 1 of the drawing shows a level body 1 with recesses 2, 3. Bubble levels 7 are placed and glued into the recesses in a subsequent production step. In addition, the level body 1 can be provided with a coating of synthetic material before or after the bubble levels have been placed in the recesses 2, 3. The measuring surface 4 located at the bottom side of the level body 1 has at a length of the level body 1 of 80 cm a tolerance with respect to its planarity of less than 0.1 mm.